

REMARKS

Applicant hereby traverses the outstanding objections and rejections, and requests reconsideration and withdrawal in light of the amendments and remarks contained herein. New claim 21 has been added for consideration. Claims 1-21 are pending in this application.

Objection to the Abstract

The abstract stands objected to for using legal phraseology. In response, Applicant has amended the abstract by eliminating the legal phrase objected to by the Examiner on page 2 of the Office Action dated October 18, 2002 (hereinafter *Office Action*). No new matter has been entered, and the abstract is amended only for the purpose of resolving the cited objection, and not for the purpose of narrowing its scope in the face of prior art. Thus, Applicant believes that the objection to the specification has been overcome, and that this objection should be withdrawn.

Rejection Under 35 U.S.C. §112 Second Paragraph

Claims 4, 5, and 9 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the words "said elongated roller" in claim 4, the words "said elongated roller" in claim 5, and the words "said low thermal mass" in claim 9 are asserted by the Office Action as lacking the proper antecedent basis.

In response, the Applicant has amended claims 4, 5, and 9 to more accurately and precisely define the invention. The claims have been amended only for the purpose of complying with the requirements of 35 U.S.C. § 112, second paragraph, and not for the purpose of narrowing their scope in the face of prior art. No new matter has been entered. The Applicant respectfully requests the rejection of claims 4, 5, and 9 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejection Under 35 U.S.C. §102(b)

Claims 1-7, 9-11, 13, 15-17, and 19 are rejected under 35 U.S.C. §102(b) as being anticipated by Moser U.S. Patent No. 5,869,809 (hereinafter *Moser*).

It is well settled that to anticipate a claim, the reference must teach every element of the claim, see M.P.E.P. § 2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim,” see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Furthermore, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim,” see M.P.E.P. § 2131, citing *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913 (Fed. Cir. 1989). Applicant respectfully asserts that the rejection does not satisfy these requirements.

Claim 1 defines a fuser assembly that comprises, at least, a roller having a heat absorptive outer layer on an inner core of a thermally isolating material. In contrast, the core of Moser comprises a radiant quartz heater, see column 3, lines 51-52. Thus, Moser does not teach all aspects of the claimed invention. Furthermore, the silicon rubber layer cited by the examiner does not thermally isolate the inner core. To the contrary, the main heating source of the heated roll structure 12 is contained within the inner core 26, and the device of Moser cannot operate in its intended manner (namely the heating of the outer surface of the roller) if the heat source is to be thermally isolated from the very surface it is intended to heat. Moser clearly indicates this when it states “[w]hen the quartz heater 28 is energized . . . this heating element radiates heat to the rigid core 26 which is then conducted to the outer surface of an outer deformable layer 30,” see Moser Col. 4 lines 65-67 and Col. 5 lines 1-2. Thus, the silicon rubber layer of Moser does not correspond to the claimed inner core of a thermally isolated material. Therefore, the Applicant respectfully asserts that for the above reasons claim 1 is patentable over the 35 U.S.C. § 102 rejection of record.

Claim 15 defines a heated fuser that comprises, at least, a fusing roller comprising low thermal mass outer layer surrounding a thermally isolating core. In contrast, the core of Moser comprises a radiant quartz heater, see column 3, lines 51-52. Thus, Moser does not teach all aspects of the claimed invention. Furthermore, the silicon rubber layer cited by the examiner does not thermally isolate the inner core. To the contrary, the main heating source of the heated roll structure 12 is contained within the inner core 26, and the device of Moser cannot operate in its intended manner (namely the heating of the outer surface of the roller) if the heat source is to be thermally isolated from the very surface it is intended to heat. Moser

clearly indicates this when it states “[w]hen the quartz heater 28 is energized . . . this heating element radiates heat to the rigid core 26 which is then conducted to the outer surface of an outer deformable layer 30,” see Moser Col. 4 lines 65-67 and Col. 5 lines 1-2. Thus, the silicon rubber layer of Moser does not correspond to the claimed thermally isolating core. Therefore, the Applicant respectfully asserts that for the above reasons claim 15 is patentable over the 35 U.S.C. § 102 rejection of record.

Claim 19, as amended, recites a method of fusing toner comprising, at least, heating a fusing roller using only radiant heat directed toward a surface of said fusing roller. By contrast, Moser discloses a structure that uses an internal heat source for fusing color toner images to a substrate, see Moser Col. 2 lines 52-63. Thus, Moser does not teach all aspects of the claimed invention. Therefore, the Applicant respectfully asserts that for the above reasons claim 19 is patentable over the 35 U.S.C. § 102 rejection of record.

Claims 2-7, 9-11, 13, and 16-17 depend directly from base claims 1 and 15, respectively, and thus inherit all limitations of their respective base claims. Each of the claims 2-7, 9-11, 13, and 16-17 sets forth features and limitations not recited by Moser. Thus, the Applicant respectfully asserts that for the above reasons claims 2-7, 9-11, 13, and 16-17 are patentable over the 35 U.S.C. § 102 rejection of record.

Rejection Under 35 U.S.C. §103(a)

Claims 8, 12, 14, 18, and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Moser in view of Onishi et al. (Japanese Patent No. 08-314323, hereinafter *Onishi*).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. §2143. Without conceding the second criteria, Applicant asserts that the rejection does not satisfy the first and third criteria.

The Office Action admits that Moser does not teach having a heat reflector, see Office Action at page 4. The Office Action attempts to cure this deficiency by introducing Onishi, which the Office Action alleges to teach having such a heat reflector. The motivation for making the combination was presented as follows:

“It would have been obvious ... so that adequate fixing heating can be applied to the media.”

It is well settled that the fact that references can be combined or modified is not sufficient to establish a prima facie case of obviousness, M.P.E.P. §2143.01. Such language is merely a statement that the reference can be modified, and does not state any desirability for making the modification. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In *re Mills*, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990), as cited in M.P.E.P. §2143.01. Moser, by itself, teaches a device that provides adequate fixing heat to the media; it is in fact the very purpose of the Moser device. The examiner has provided no motivation for adding elements to Moser in order to achieve an outcome Moser already accomplishes. Thus, the motivation provided by the Examiner is improper, as the prior art does not suggest the desirability of the combination. No valid suggestion has been made as to why a combination of Moser and Onishi is desirable. Therefore, the rejection of claims 8, 12, 14, 18, and 20 should be withdrawn.

Further, this combination, as presented, does not teach or suggest all limitations of the claimed invention. As shown above, Moser does not disclose all of the elements recited in independent claims 1, 15, and 19, and Onishi is not relied upon as teaching these limitations. Claims 8, 12, 14, 18 and 20 depend directly from base claims claim 1, 15, and 19, respectively, and thus, these claims thus inherit all limitations of their respective independent claims. Similarly, new claim 21 also depends from base claim 19. Each of claims 8, 12, 14, 18, and 20-21 set forth features and limitations not recited by the combination of Moser and Onishi. Therefore, Applicant respectfully asserts that for the above reasons claims 8, 12, 14, 18, and 20-21 are patentable over the 35 U.S.C. § 103(a) rejection of record.

Amendments to Claims

Claim 19 has been amended to more clearly and broadly define the invention. Specifically, the words "focused upon" have been replaced with "directed toward". Claim 20 has also been amended to delete a portion of the claimed subject matter. This deleted portion has been re-written into new claim 21. Note that these amendments are not made for the purpose of narrowing their scope in the face of prior art. No new matter has been added by these amendments.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

Applicant believes that a fee of \$18.00 is due with this response. Please charge our Deposit Account No. 08-2025, under Order No. 10007748-1 from which the undersigned is authorized to draw. If any additional fees are due, please charge our deposit account.

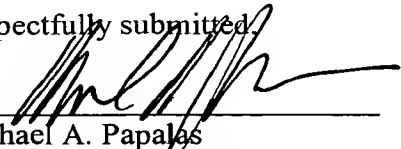
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Version With Markings to Show Changes Made

The Abstract

The Abstract has been amended as follows:

A fuser assembly [comprising of] with a roller having a heat absorptive outer layer on an inner core of a thermally isolating material and a radiant heating element positioned adjacent and external to the outer layer of a roller.

In the Claims

Claim 4, 5, 9, 19 and 20 have been amended as follows:

4. The fuser assembly according to claim 1 further comprising a temperature transducer configured to detect a surface temperature of said [elongated] roller.

5. The fuser assembly according to claim 1 further comprising a heating element controller configured to operate said heating element in response to a temperature of said [elongated] roller.

9. The fuser assembly according to claim 1 wherein said [low thermal mass] outer layer has a thickness of between zero and three millimeters.

19. A method of fusing toner onto a media comprising the steps of:
[radiantly] heating a fusing roller using only radiant heat [focused upon] directed toward a surface of said fusing roller; and

transporting the media into rolling contact with said fusing roller to simultaneously heat said toner to a desired temperature and apply pressure to the toner causing the toner to fuse to the media.

20. The method according to claim 19 further comprising the steps of:
applying the toner to the media;
radiationally preheating the toner on a portion of the media prior to said transporting
step bringing said portion into contact with said fusing roller[;
detecting a temperature of said fusing roller; and
controlling said step of generating in response to said detected temperature].

New claim 21 had been added:

21. The method according to claim 19 further comprising the steps of:
detecting a temperature of said fusing roller; and
controlling said step of heating in response to said detected temperature.